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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,152	07/03/2001	Michael Wen-Chein Yang	POLY-1193	7052

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EXAMINER	
HAMILTON, CYNTHIA	
ART UNIT	**PAPER NUMBER**
1752	

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Please find below and/or attached an Office communication concerning this application or proceeding.

CLO-21

Office Action Summary	Application No.	Applicant(s)	
	09/898,152	YANG ET AL.	
	Examiner	Art Unit	
	Cynthia Hamilton	1752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 August 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15,17-20,22,26,27,30-39,42 and 44-51* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15,17-20,22,26,27,30-39,42 and 44-51* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

Applicants in their Patent Application Transmittal letter of July 3, 2001 reference continuity to 08/479,337 that is given as a continuation in part of 08/082,689. It is not. 08/479,337 does not claim such continuity. 08/479,337 has a completely different set of inventors from this application and 08/082,689. The examiner notes that applicants may have meant 08/479,339 instead of 08/479,337. Thus, applicants have failed to make specific reference to the earlier filed application is submitted at such time during the pendency of the application. The applications do not have even one inventor in common with respect to 08/479,337. 08/479,337 **does not claim continuity back to** 08/082,689. Thus, at this time, the oldest effective filing date in this application is to 08/905,654 and is August 4, 1997. The examiner notes she has just recognized this lack of compliance with respect to continuity. The examiner also believes the oath presented in this application is that of 08/479,339 since the only serial number cited in the oath is 08/082,689 and the dates of signature are 1995 in the oath given.

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 15, 17-20, 22, 26-27, 30-39, 42, 44-51 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. Applicant has not pointed out where the new (or amended) claim is supported, nor does there appear to be a written description of the claim limitation "photopolymerizable" in the application as filed. Claims 15, 17-20, 22, 26-27, 30-39, 42, 44-51 all make reference to "photopolymerizable" whether it is material and/or plates. This term is never used in the original disclosure of this application. What is used is "photopolymer", "photocurable", "reactive diluents" in the Background of the Invention, and "photosensitive polymer plate". Applicants in their amendment of August 13, 2001 introduced the term "photopolymerizable".

4. Claims 15, 17-20, 22, and 26-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In claim 15, c) is found "infrared" in reference to "at least one ablation layer which is ablatable by infrared radiation" and under ii) "wherein the ablation layer is ablatable from the surface of the photopolymerizable layer upon exposure to infrared laser radiation". The word "infrared" is not used in the original specification or claims. What is found is reference to two lasers using infrared wavelengths to test ablation of the slip layer of the instant application. Applicants have failed to present sufficient evidence to support the genus of photosensitive elements with infrared ablatable layers over photopolymerizable layers being part of the original disclosure. YAG lasers are disclosed in Example 3 as follows:

"The YAG laser was found to be essentially ineffective in causing any ablation."

Applicants then summed up the results of tests showing their CO2 laser in Example 3 as follows:

> " However, even for those profiles, the surface was highly textured and rough. Also, the resolution was poor for the letters. Thus, it was seen that the basic idea of the laser-imaged printing plate was demonstrated, and that use of the CO_2 laser resulted in thermal ablation with a consequent loss of resolution. "

Thus, applicants disclosed one example using one specific system wherein a laser in the infrared region was used to form a plate that showed the "basic idea of the laser-imaged printing plate". Applicants never disclosed using the entire infrared region. They originally disclosed using lasers generally to ablate layers as described then showed using ultraviolet lasers to ablate successfully and one infrared laser to ablate poorly as well as one infrared laser "to be essentially ineffective in causing any ablation". The examiner finds the one species of laser ablations shown insufficient support for the genus of "infrared ablation" now set forth applicants claims 15, 17-20, 22, and 26-27. Applicants have not submitted sufficient evidence to show workers of ordinary skill in the art would have recognized in view of applicant's disclosure that this species was set forth. Applicants introduced the word "infrared" in their August 13, 2001 amendment.

The examiner addresses the Declaration of Dr. Kanga filed on August 12, 2003.

5. The Declaration of Dr. Kanga filed on August 12, 2003 is considered under 37 CFR 1.131 but is ineffective to overcome rejections of claims 15, 17-20, 22, 26-27, 30-39, 42 and 44-51 under 35 U.S.C. 112, first paragraph. The reasons follow:

First, the examiner notes that the Declaration as submitted has no documents marked A, B, C, D, E, F or G. There are papers attached that appear generally to be the original disclosure of SN 08/082689 that was filed on June 25, 1993 and a copy of the instant claims submitted August 12, 2003. There are five pages that appear to be copies of handwritten pages and copies of four pages of a W.R. Grace confidential paper. The examiner believes these were to be Exhibits A through G but since they are not tagged so, she cannot state that they are those cited by Dr. Kanga in his Declaration. Thus the Declaration is insufficient because of this alone.

Dr. Kanga is one of the inventors of this application.

Dr. Kanga states he is a person who had skill in the relevant art at least as early as 1993. He states he has reviewed the inventions in the "above noted patent application, the parent of which was filed in the U.S. Patent and Trademark Office on June 25, 1993, a copy of which is appended hereto as Exhibit A." The only application number "above" is 09/898,152. There are papers (29 pages) attached that appear generally to be the original disclosure of SN 08/082,689 that was filed on June 25, 1993 and is a parent of this application.

Dr. Kanga states he has considered the claims now active "in this present patent application (Serial No. 09/921,589) and appended hereto as Exhibit B". The examiner notes the attached unlettered pages 1-6 titled "CLAIM AMENDMENTS", which follows

the 29 pages previously mentioned, are assumed to be unlabeled Exhibit B and is a copy of the amended claims of Serial No. 09/898,152 which is the current application and not Serial No. 09/921,589. Thus, there is some confusion as to what claims were considered by Dr. Kanga in his Declaration.

Dr. Kanga at 8 states "As a person skilled in the art, upon reading the June 1993 parent of this application, it is clear that the subject matter currently claimed was reasonably described in the June 1993 patent application such that the skilled person could reasonably reproduce the invention of the currently pending claims."

Under 12, Dr. Kanga sets forth what he finds as support for claim 15 in the earliest parent application that is critical to perfect the filing date back to the original parent application. The examiner does note that as to "photopolymerizable material" on page 3, lines 9-13, cited by Dr. Kanga, the disclosure is actually to a photocurable layer which can be formulated from any of a wide variety of known photopolymers, initiators, reactive diluents, fillers, etc. There is no mention of photopolymerizable with respect to this layer in the original specification. Dr. Kanga cites page 14, lines 15-20 as support for "ablation layer ablatable from the surface of the photopolymerizable layer upon exposure to infrared laser radiation". These lines are as follows:

"The Laser

A laser is employed to precisely remove the slip film exposing the photopolymer underneath to subsequent flood exposure and cure. The wavelength and power of the laser should be such that the laser treatment can ablate the slip film without damage to the photopolymer layer just beneath. Excimer lasers..."

The examiner does not see the genus infrared ablatable layers being disclosed in these lines. Thus, Dr. Kanga's evidence is insufficient to support the for infrared ablation layers for which it is referenced as support. The examiner accepts that an ablation layer ablatable with a laser of sufficient wavelength and power that it is fully ablated without damage to the photopolymer layer just beneath is supported by these lines, but there is no generic disclosure to all infrared ablatable layers found in these lines.

Dr. Kanga under 8.b. states "Example 3 clearly describes ablation imaging using lasers emitting in the IR range specifically YAG and CO_2 lasers". The examiner notes that the only mention of YAG lasers in Example 3 is that they were "employed for the ablative studies" and "The YAG laser was found to be essentially ineffective in causing any ablation." The examiner sees this as disclosure the YAG laser did not work as the ablation layer sought by applicants. There is no indication in the application that the YAG laser ever worked or would be workable. The title of Example 3 is "Laser Ablation and Imaging Using a Solid-State Sealed CO_2 Laser (10.6 nm)." The examiner sees no disclosure which would lead a worker of skill in the art to assume the YAG laser was a viable choice or that the slip layers of the applicant would ablate in the manner set forth on page 14, lines 15-20 of their specification. Example 3 does show that changing power

watts with the CO_2 laser did finally achieve a raised image of lettering but the plate surface was uneven as shown in Table II. On page 21, of the parent specification, presumably Exhibit A, is found:

> *"Also the resolution was poor for the letters. Thus, it was seen that the basic idea of laser-imaged printing plate was demonstrated, and that use of the CO_2 laser resulted in thermal ablation with a consequent loss in resolution."*

There is no clear showing that the CO_2 laser of Example 3 would ever yield an ablatable layer as required on page 14 only that it could yield basically yield a system that did give an image. The examiner believes this Example 3 would tell a worker of skill in the art that IR lasers were not very promising and that none worked as required on page 14. However, the showing did not exclude infrared lasers from the generic group of all lasers that would perform as set forth on page 14. The limit of page 14, lines 15-20 is not part of the claimed invention.

Thus, Dr. Kanga's declaration fails to show workers of skill in the art in viewing the current application and that part of it in the original Patent application 08/082,689 would have understood that the infrared ablatable layered photopolymerizable plates were clearly disclosed that are part of the processes now claimed enough that they would understand the scope of the claims were defined as being applicant's invention. Dr. Kanga references what he had done and not disclosed to the public. This is not relevant evidence to the record for this issue. It is what workers of skill in the art know at the time of filing that is at issue. Dr. Kanga does not submit evidence of the skill level in the laser ablation art or the photocure art or printing plate art to support his allegation that Table II in the 1993 application, page 20, is sufficient to direct workers of ordinary skill in the art

to understand that "mere slight modification to the laser power" evident to make the entire range of infrared laser ablatable layers part of the disclosure when the examiner assumed such testing must have been done to support the statement "The YAG laser was found to be essentially ineffective in causing any ablation." The examiner does not understand why a worker of skill in the art would assume the applicant set forth their best effort in their declaration with respect to YAG and CO2 lasers and ablatable layers. Dr. Kanga repeatedly refers to "photopolymerizable layers" when none were disclosed in either the current original disclosure or the oldest alleged parent application. Point 13 of the Declaration is not to the issue of what one skilled in the relevant art viewing the specification would reasonably believe the inventor had possession of at the time of filing not what could be reproduced from the application in view of the current claims by one skilled in the art. This point is drawn to removing Fan as a reference apparently under 35 USC 1.132.

Thus, the Kanga Declaration fails to remove the rejections of record under 35 USC 112, first paragraph.

6. Claims 15, 17-20, 26 and 46-49 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fan (6,238,837 B1). Applicants have amended the Markush group of binder in claim 15 to exclude cellulosic binders thus removing the issue of anticipation from the originally submitted claims. However, with respect to the use of polyimides, polyesters, polymers of ethylene, polybutylene, polyacrylics, polyethylene, polyphenylene ethers and polyethylene oxides, Fan in col. 9 lines 40-58 disclose their use in his IR ablatable layers. Fan cited by applicants has a filing date of May 1, 1995 which is before the

filing date of the oldest effective date of the same application, i.e. 08/479,339 filed June 7, 1995. However, the oldest effective filing date is June 25, 1993, drawn to a continuation - in -part of US SN 08/082,689. The examiner had read this oldest application and found the same data supporting an IR ablatable layer in both the current application and the oldest application. It is a series of tests showing that the YAG laser does not ablate the instant layers but the CO2 laser does but only for an ablatable layer with a polyamide binder and a photopolymerizable layer identified as analogous to the "KOR" printing plates. There is no further clarification as to what is in KOR. The instant claims 15, 17-20, 26 and 46-49 are only supported in their breadth now claimed by applicants in the amendment filed August 13, 2001. Thus, Fan is seen as prior art for the binders in these claims which are not polyamides and for the processes wherein polyamides are ablated with an Nd: YAG laser. Thus, the examples anticipate the instant processes of claims 15, 17-20, 26 and 46-49 and in the alternative the use of any of the binders as set forth in Fan in column 9 in the IR ablatable layers set forth would have been prima facie obvious because they were taught by Fan et al as being suitable. Fan anticipates the instant process wherein butadiene-styrene block polymers are listed as one choice of binder in the photopolymerizable layer. The examiner notes that Fan does not claim a process and the element claimed by Fan is limited to the presence of a monomer as well as an elastomeric binder. However, the process of imaging with an infrared ablatable layer comprised of a binder that can be a polyamide is disclosed. In Fan, see particularly Abstract, col. 2, lines 8-10, 23-28, col. 3, lines 48-65, col. 4, lines 20-31, 55-61, col. 5, lines 65-67, col. 6, lines 1-35, col. 7, lines 55-63, col. 9, lines 10 through col. 10, lines 48, col. 12, lines 8- col. 13, lines 40 and examples and claims. With respect to instant claims 46-49, there is no disclosure to photopolymerizable layers going further back than Fan.

7. The Declaration of Dr. Kanga filed August 12, 2003 was considered under 37 CFR 1.132 and is found insufficient to overcome the rejection of claims based upon as set forth in the last Office action because:

First, the examiner notes that the Declaration as submitted has no documents marked A, B, C, D, E, F or G. There are papers attached that appear generally to be the original disclosure of SN 08/082689 that was filed on June 25, 1993 and a copy of the instant claims submitted August 12, 2003. There are five pages that appear to be copies of handwritten pages and copies of four pages of a W.R. Grace confidential paper. The examiner believes these were to be Exhibits A through G but since they are not tagged so, she cannot state that they are those cited by Dr. Kanga in his Declaration. Thus the Declaration is insufficient because of this alone.

The evidence submitted by Dr. Kanga in his Declaration does not state anywhere the genus of infrared ablatable layers. Nor is there any evidence of record that the Flexlight KOR plate was a photopolymerizable plate other than allegation of applicant. The examiner found no disclosure in any of the attached pages to a successful YAG laser imaged plate. Thus, the pages attached to not sufficient evidence to the instant application to show applicants had possession of the photopolymerible plate process and the generic infrared ablatable layer. The examiner notes for the record that the infrared range is much broader than the 1.6 μm of the YAG and the 10.6 μm of the CO_2 laser set forth. It is from 1000 μm to 1 μm as shown by the RCA Electro-Optics Handbook of 1974. Thus, even the alleged showing of the YAG and the CO_2 laser by applicants would not necessarily made clear to the worker of skill in the art that applicants meant all of the infrared range by those tests performed in their application.

1. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scott Paper Company (GB 1,492,070) and in view of the Murphy Declaration filed October 24, 2002 further in view of Law et al (4,492,750). Scott Paper Company discloses on page 1, lines 66-79 a presensitized planographic printing plate having a layer of material which is sensitive to ultraviolet light, is provided with a coating which is opaque to ultraviolet light and is capable of being removed or rendered transparent to ultraviolet light by non-UV laser radiation. The layer that is sensitive to ultraviolet light is disclosed as any one of the commercially available types of either positive working or negative working plates. The nature of the presensitized printing plate portion of the plate of the Scott invention is not critical for the reason that once the mask is formed in situ and the plate is exposed to ultraviolet light, development proceeds in a conventional manner. The layer of material which is opaque to ultraviolet light and capable of being removed or rendered transparent to ultraviolet light by non-UV laser radiation can be a dispersion of metal or carbon particles in an organic binder. The opaque layer must be thick enough to be opaque to ultraviolet while remaining thin enough to be vaporized and removed rapidly with a minimum amount of radiant energy applied by the laser for this purpose. Scott Paper Company discloses this in the paragraph bridging pages 1-2. Scott Paper Company also discloses selection of an appropriate laser for removing the layer of material which is opaque to ultraviolet light is well within the skill of the ordinary worker in the art to which their invention pertains. Means for modulating a laser beam to record information on a substrate is well known also. Scott Paper Company goes on to disclose "In general they can be characterized as scanning mechanisms which cause the beam to traverse the area, delivering energy in a predetermined

manner." Scott Paper Company has an example of a photopolymerizable layer wherein carbon black is the UV absorbant and Nitrocellulose is the binder. Carbon black is well known in the art to be an infrared absorber as well. The only working example of Scott Paper Company also like the instant applicants uses a binder not in the list given. Scott Paper Company teaches the instant element of claims 15-16 with the exception of the binders given in the instant claims and not specifically mentioning using an IR laser for the ablation. With respect to instant claims 15 and 16, the examiner states in view of Mr. Murphy's expert opinion that the disclosure of one IR ablatable layer in the materials of the 1993 application as being sufficient to give support for the instant claims which have no binder in common with the disclosure of the sole IR ablatable material disclosed functional enough to form a working plate, then the disclosure of Scott Paper Company is sufficient to make obvious the use of any binders used in non-UV laser radiation ablatable layers known in the art before the 1993 disclosure as well as any ultraviolet lithographic negative acting presensitised plates known before the 1993 disclosure, because the predictability of the art at the filing of the 1993 disclosure is so predictable to allow such breadth of obviousness. Law et al teach one kind of laser ablatable layers known at the time of the 1993 disclosure. Law et al make use of polymeric binders inclusive of polyesters, polyacrylates, polymethacrylates, and polycarbonates mixed with IR absorbing compounds to make laser ablatable layers. With respect to instant claims 15-16 and to Scott Paper company and in view of Mr. Murphy's declaration as to the level of skill in the art, the use of known ablatable layers such as those of Law et al as the non-ultraviolet removable layer of Scott Paper and thus be used in the processes of Scott Paper would have been the prima facie obvious use of an art recognized

available laser removable material as directed by Scott Paper. In Law et al, see particularly the abstract, col. 5,lines 9-25, col. 7, lines 12-23.

2. Applicants presented no arguments with respect to Scott paper and Law et al.

8. Applicant's arguments filed August 12, 2003 have been fully considered but they are not persuasive. Applicants' arguments supported by the Kanga declaration have been addressed. Applicants argue all the binders set forth are supported for the infrared species. The examiner agrees that for the ablatable species disclosed they are supported. However, it is not clear the species of infrared ablatable layers is supported and in this the examiner holds to her rejection. The rejections stand as given.

9. Because of the new rejection with respect to "photopolymerizable" this action is not made final.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is (703) 308-3626. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on (703) 308-2303. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 0661.

Primary Examiner Cynthia Hamilton
November 3, 2003

CYNTHIA HAMILTON
PRIMARY EXAMINER